

STANFORD UNIVERSITY Research Consent Form

Protocol Director: Dr. Jessica Ansari

IRB Use Only

Approval Date: April 9, 2018

Expiration Date: October 17, 2018

Protocol Title: Calcium Chloride in the Prevention of Uterine Atony During Cesarean in Women at Increased Risk of Hemorrhage: a pilot randomized controlled trial and pharmacokinetic study

STANFORD CONSENT FORM with HIPAA

Are you participating in any other research studies? ____ Yes ____ No

PURPOSE OF RESEARCH

You are invited to participate in a research study of the effects of **calcium on uterine tone and blood loss at the time of Cesarean section**.

Calcium is an electrolyte that is present and abundant in the body. Calcium is important for normal functioning of many parts of the body including the heart, the brain, and blood clotting. Calcium has also been shown to help uterine muscles contract in laboratory studies. Anesthesiologists commonly administer calcium to patients through the IV during many types of surgeries.

We hope to learn **whether giving a single dose of calcium** (an IV solution called calcium chloride) **after delivery** of your baby or babies **can help your uterus contract and prevent severe blood loss**. Although calcium is commonly administered at this dose, using calcium to try to help the uterus contract would be considered "investigational" as studies have not been done for this indication. You were selected as a possible participant in this study because you have been identified as having an increased risk of blood loss during your Cesarean.

Intravenous calcium chloride is approved by the FDA for administration to treat low calcium levels. Anesthesiologists also frequently administer calcium to patients to help with low blood pressure, poor blood clotting, elevated magnesium, or elevated potassium levels. Anesthesiologists have described using calcium to help the uterus contract as animal studies show that calcium is helpful, but adequate studies have not been performed to see how effective this actually is in humans. Studies have not been done to address whether administering calcium to a pregnant woman crosses the placenta or affects the fetus. However, for this study, no calcium would be given to you until your baby had already been delivered.

If you decide to terminate your participation in this study, you should notify Dr. Jessica Ansari at 650-721-0866. For any urgent questions or concerns regarding the study, you can call 650-723-5403 and ask to speak with an Obstetric anesthesiologist at Lucile Packard Children's Hospital 24 hours, 7 days per week.

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This research study is looking for 40 patients undergoing Cesarean section at Lucile Packard Children's Hospital Stanford who have been identified as having more than one risk factor for increased bleeding. Enrollment will only occur at Lucile Packard Children's Hospital Stanford.

VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. Your decision not to participate will not have any negative effect on you or your medical care. You can decide to participate now, but withdraw your consent later and stop being in the study without any loss of benefits or medical care to which you are entitled.

DURATION OF STUDY INVOLVEMENT

This research study is expected to take one to two years to recruit and enroll all patients. You will only be an active participant in the study during your Cesarean section and up until the day after delivery. You will NOT be contacted after your delivery and will NOT need to attend any appointments as part of this study.

PROCEDURES

If you choose to participate, Dr. Ansari and her research study team will give the anesthesiologist caring for you a bag of medicine to deliver in the IV after your baby is born. This bag will either contain calcium chloride 1 gram or simple saline (also known as a placebo). 50% of patients will receive the calcium, and 50% of patients will receive the saline (placebo). Your anesthesiologist, your surgeon, and you will NOT know whether you are receiving calcium or the plain saline.

The experimental treatment for this study is the calcium chloride solution administered in the IV. Regardless of whether you receive calcium or saline solution, you will receive all of the standard medications and treatments during your Cesarean. We will record all the doses of medications you receive during your Cesarean, as well as how much blood is lost during your surgery. We will also record the values from the routine labs that are done before and after any Cesarean.

This study does NOT require you to undergo any additional procedures or lab testing. However, if you are willing, we are asking **all of our research subjects to supply up to 3 small tubes of blood**, less than 3 teaspoons in total, to allow us to measure the calcium levels in the blood. Whenever possible, we will draw these blood samples simply by drawing back on your IV. When this

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is not possible, we may do a standard lab draw with a small needle. You will not be charged for any lab studies related to this research. If you agree to blood sampling, the labs will be drawn

- 1) In the preoperative area
- 2) In the operating room after the medicine has been administered
- 3) In the recovery room after your Cesarean

If you agree to provide blood samples, these samples will not be saved or stored for any future research. Blood calcium level will be assessed, and the remaining blood will be discarded.

You may still participate in this study even if you choose not to undergo any additional laboratory studies. All the rest of your care including lab draws and medications administered will follow the standard of care and will be determined by your anesthesiologist and obstetrician.

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40 women with >1 risk factors for bleeding are enrolled prior to Cesarean. A computer has randomly assigned each woman to receive calcium or simple saline. The patient, the anesthesiologist, and the surgeon will NOT know whether she is receiving calcium or saline.

20 women receive 1 gram of intravenous calcium chloride in 50ml saline after delivery of the baby
As well as oxytocin and all other standard of care medications and interventions at the discretion of the anesthesia and surgical teams

20 women receive 60ml intravenous saline placebo after delivery of the baby
As well as oxytocin and all other standard of care medications and interventions at the discretion of the anesthesia and surgical teams

If patients agree, they will undergo a maximum of 3 lab draws to assess serum calcium levels. All consented patients will be asked if willing to undergo the additional lab draws.

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Patients are assessed for the following, all of which are standard-of-care assessments:

- presence or absence of uterine atony (low uterus muscle tone)
- total blood loss (estimated and measured)
- change in hematocrit on standard preoperative and postoperative labs
- blood pressure and heart rate recorded during Cesarean
- amount of medication needed to maintain a normal blood pressure
- any possible side effects of calcium

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PARTICIPANT RESPONSIBILITIES

As a participant, if you have agreed to be in the group of patients supplying 3 small blood samples, your only responsibility is to allow us to perform a total of 3 lab draws: 1 before, 1 during, and 1 after your Cesarean.

If you have elected to participate without lab draws, you have no significant responsibilities, other than receiving either calcium or placebo during your Cesarean, and consenting to us gathering data from your chart.

- Follow the instructions of the Protocol Director and study staff.
- Tell the Protocol Director or research study staff about any side effects, doctor visits, or hospitalizations that you may have.
- Ask questions as you think of them.
- Tell the Protocol Director or research staff if you change your mind about staying in the study.

WITHDRAWAL FROM STUDY

If you first agree to participate and then you change your mind, you are free to withdraw your consent and discontinue your participation at any time. Your decision will not affect your ability to receive medical care for your pregnancy and postpartum period, and you will not lose any benefits to which you would otherwise be entitled.

If you decide to withdraw your consent to participate in this study, you should notify Dr. Edward Riley at 650-498-7787. For any urgent questions or concerns regarding the study, you can call 650-723-5403 and ask to speak with an Obstetric anesthesiologist at Lucile Packard Children's Hospital 24 hours per day, 7 days per week.

If you withdraw from the study, or the calcium medication is stopped for any reason:

- We will record the reason for stopping the medication and/or withdrawing from the study
- We will follow you for any side effects, questions, or concerns
- We will still analyze anonymous information about your blood loss during Cesarean if the calcium medication is stopped

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The Protocol Director may also withdraw you from the study and the calcium medication may be stopped without your consent for one or more of the following reasons:

- Failure to follow the instructions of the Protocol Director and study staff.
- The Protocol Director decides that continuing your participation could be harmful to you.
- The study is cancelled.
- Other administrative reasons.
- Unanticipated circumstances.

POSSIBLE RISKS, DISCOMFORTS, AND INCONVENIENCES

There are risks, discomforts, and inconveniences associated with any research study. These deserve careful thought. You should talk with the Protocol Director if you have any questions.

- Calcium chloride infusion is generally very well tolerated, especially when diluted and administered slowly as will be done for this study. Most common reported side effects include **mild discomfort in the IV, a funny taste in the mouth or sensation in the tongue, and nausea.**
- In rare cases, rapid intravenous injections of calcium chloride may cause **excessively high calcium levels in the blood**, which can result in vasodilation, abnormal heart rhythms, decreased blood pressure, and bradycardia (slow heart rate).
- If the IV used to administer the calcium does not function properly, the calcium can cause significant **inflammation and discomfort in the hand or arm**. In very rare cases, this can lead to significant damage to the tissues of the arm requiring medical attention. Your IV will be assessed carefully by the anesthesiologist (as a working IV is essential for ANY patient undergoing Cesarean) before administering calcium. If you experience pain or discomfort in your IV at any point, the anesthesiologist will carefully inspect your IV site and pause the infusion if there is any concern.
- All patients are monitored continuously during Cesarean on EKG (heart rhythm) monitors, and the anesthesiologist is present at all times. If you are having any signs of intolerance, the infusion will be discontinued. Any side effects are expected to be short-lived.
- It is always possible that there could be other risks of administering calcium during a Cesarean, which are currently unforeseeable.

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POTENTIAL BENEFITS

One potential benefit of the study is that the calcium administered to patients may help the uterus to contract and decrease the amount of bleeding during Cesarean. This is the goal of the study.

We cannot and do not guarantee or promise that you will receive any benefits from this study.

ALTERNATIVES

The alternative is not to participate in the study. All patients who participate in the study will receive the same standard of care medications, surgical procedure, follow up, and labs that any other patient will receive.

PARTICIPANT'S RIGHTS

You should not feel obligated to agree to participate. Your questions should be answered clearly and to your satisfaction. If you decide not to participate, tell the Protocol Director.

You will be told of any important new information that is learned during the course of this research study, which might affect your condition or your willingness to continue participation in this study.

ClinicalTrials.gov

A description of this clinical trial will be available on <http://www.ClinicalTrials.gov>, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

CONFIDENTIALITY

The results of this research study may be presented at scientific or medical meetings or published in scientific journals. Your identity and/or your personal health information will not be disclosed except as authorized by you or as required by law. However, there is always some risk that even de-identified information might be re-identified.



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Patient information may be provided to Federal and other regulatory agencies as required. The Food and Drug Administration (FDA), for example, may inspect research records and learn your identity if this study falls within its jurisdiction.

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Authorization To Use Your Health Information For Research Purposes

Because information about you and your health is personal and private, it generally cannot be used in this research study without your written authorization. If you sign this form, it will provide that authorization. The form is intended to inform you about how your health information will be used or disclosed in the study. Your information will only be used in accordance with this authorization form and the informed consent form and as required or allowed by law. Please read it carefully before signing it.

What is the purpose of this research study and how will my health information be utilized in the study?

This study is investigating whether giving a single dose of calcium (an IV solution called calcium chloride) can help the uterus contract and prevent severe blood loss during Cesarean surgery. This medication is routinely administered by anesthesiologists during many types of surgery, including studies in pregnant patients. However, it has not been studied in patients at risk for bleeding during Cesarean surgery. If you are willing, you may have also been asked to provide 3 blood samples to allow us to measure the blood calcium levels and assess whether the calcium helps the blood clotting.

You were selected as a possible participant in this study because you have been identified as having some risk factors for blood loss during your Cesarean. As part of this study, information will be collected from your chart including how much blood is lost during the surgery, what other medications are administered, and how the routine lab values after surgery change. This anonymous information may be used in publication in academic journals or at academic meetings; however, no personal information that identifies you in any way will be used.

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Do I have to sign this authorization form?

You do not have to sign this authorization form. But if you do not, you will not be able to participate in this research study including receiving any research-related treatment.

Signing the form is not a condition for receiving any medical care outside the study.

If I sign, can I revoke it or withdraw from the research later?

If you decide to participate, you are free to withdraw your authorization regarding the use and disclosure of your health information (and to discontinue any other participation in the study) at any time. After any revocation, your health information will no longer be used or disclosed in the study, except to the extent that the law allows us to continue using your information (e.g., necessary to maintain integrity of research). If you wish to revoke your authorization for the research use or disclosure of your health information in this study, you must write to:

Dr. Jessica Ansari, Stanford Obstetric Anesthesia
300 Pasteur Drive, Room H3580, Stanford, CA 94305,
Mail Code 5640

What Personal Information Will Be Obtained, Used or Disclosed?

Your health information related to this study, may be used or disclosed in connection with this research study, including, but not limited to:

- Your name and medical record number will be recorded upon enrollment in the study, but will be kept confidential and WILL NOT be shared in any publications about the results of this study
- Your age, weight, and number of prior pregnancies
- Your current medications and any past medical conditions
- Information about your pregnancy and/or labor that can impact the risk of bleeding during Cesarean

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- Your baseline preoperative hemoglobin and hematocrit levels, which are drawn in all patients before Cesarean
- Medications administered during your Cesarean
- Your blood pressure and heart rate values during Cesarean
- Estimated blood loss during Cesarean surgery
- Hemoglobin and hematocrit labs drawn as routine care after Cesarean
- Any complications during your delivery or hospital stay
- Any possible side effects of calcium or saline infusion
- Lab calcium measures drawn as part of the study, if you agreed to undergoing the 3 lab draws

Who May Use or Disclose the Information?

The following parties are authorized to use and/or disclose your health information in connection with this research study:

- The Protocol Director, Dr. Jessica Ansari
- The Stanford University Administrative Panel on Human Subjects in Medical Research and any other unit of Stanford University as necessary
- Research Staff

Who May Receive or Use the Information?

The parties listed in the preceding paragraph may disclose your health information to the following persons and organizations for their use in connection with this research study:

- The Office for Human Research Protections in the U.S. Department of Health and Human Services
- The Food and Drug Administration (FDA)

Your information may be re-disclosed by the recipients described above, if they are not required by law to protect the privacy of the information.

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When will my authorization expire?

Your authorization for the use and/or disclosure of your health information will end on December 31, 2050 or when the research project ends, whichever is earlier.

Signature of Adult Participant_____
Date_____
Print Name of Adult ParticipantParticipant ID: 

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FINANCIAL CONSIDERATIONSPayment

You will not be paid to participate in this research study.

Costs

There is no cost to you for participating in this study. If you are undergoing the lab calcium and blood clotting studies, the anesthesia department will pay the cost of those labs. Neither you nor your insurance will be billed for the calcium administered or the labs drawn as part of the study.

COMPENSATION for Research-Related Injury

All forms of medical diagnosis and treatment – whether routine or experimental – involve some risk of injury. In spite of all precautions, you might develop medical complications from participating in this study. If such complications arise, the Protocol Director and the research study staff will assist you in obtaining appropriate medical treatment. In the event that you have an injury or illness that is directly caused by your participation in this study, reimbursement for all related costs of care first will be sought from your insurer, managed care plan, or other benefits program. **You will be responsible for any associated co-payments or deductibles as required by your insurance.**

If costs of care related to such an injury are not covered by your insurer, managed care plan or other benefits program, you may be responsible for these costs. If you are unable to pay for such costs, the Protocol Director will assist you in applying for supplemental benefits and explain how to apply for patient financial assistance from the hospital.

You do not waive any liability rights for personal injury by signing this form.

CONTACT INFORMATION

Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures, risks and benefits, or alternative courses of treatment, you should ask the Protocol Director, Dr. Jessica Ansari, at 650-721-0866. You should also contact her at any time if you feel you have been hurt by being a part of this study.



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For any urgent questions or concerns regarding the study, you can call 650-723-5403 and ask to speak with an Obstetric anesthesiologist at Lucile Packard Children's Hospital / Stanford 24 hours, 7 days per week.

If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Board Review (IRB) to speak to someone independent of the research team at 650-723-5244 or toll free at 1-866-680-2906. You can also write to Stanford IRB, Stanford University, 3000 El Camino Real, Five Palo Alto Square, 4th Floor, Palo Alto, CA 94306.

EXPERIMENTAL SUBJECT'S BILL OF RIGHTS

As a research participant you have the following rights. These rights include but are not limited to the patient's right to:

- be informed of the nature and purpose of the experiment;
- be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be utilized;
- be given a description of any attendant discomforts and risks reasonably to be expected;
- be given an explanation of any benefits to the subject reasonably to be expected, if applicable;
- be given a disclosure of any appropriate alternatives, drugs or devices that might be advantageous to the subject, their relative risks and benefits;
- be informed of the avenues of medical treatment, if any available to the subject after the experiment if complications should arise;
- be given an opportunity to ask questions concerning the experiment or the procedures involved;
- be instructed that consent to participate in the medical experiment may be withdrawn at any time and the subject may discontinue participation without prejudice;
- be given a copy of the signed and dated consent form; and
- be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion or undue influence on the subject's decision.

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Signing your name means you agree to be in this study and that you will receive a copy of this signed and dated consent form.

Signature of Adult Participant_____
Date_____
Print Name of Adult Participant

The following witness line is to be signed only if the consent is provided as a summary form and accompanied by a short form foreign language consent.

Signature of Witness_____
Date_____
Print Name of Witness

(e.g., staff, translator/interpreter, family member, or other person who speaks both English and the participant's language)

- *Translated short form must be signed and dated by both the participant AND the witness.*
- *The English consent form (referred to as the "Summary Form" in the regulations):*
 - *Must be signed by the witness AND the Person Obtaining Consent (POC).*
 - *The non-English speaking participant does not sign the English consent.*
 - *The non-English speaking participant should not sign the HIPAA participant line*
 - *If the participant is non-English speaking, the Person Obtaining Consent (POC) must ensure that any questions or options presented by the consent form are documented and initialed by the POC on the Summary Form, per the participant's wishes, as they are understood during the consent process.*

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